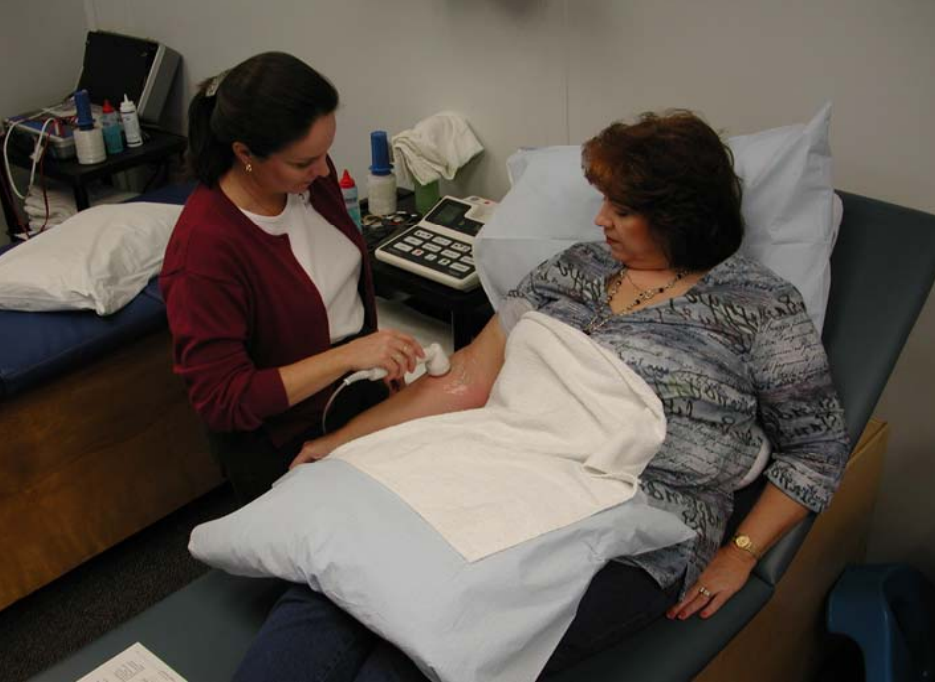




Physical Medicine & Musculoskeletal Rehabilitation at the Kennedy Space Center

Mary K. Kirkland, MS, ATC, LAT, CSCS
Supervisor, KSC RehabWorks
The Bionetics Corporation
Kennedy Space Center, FL





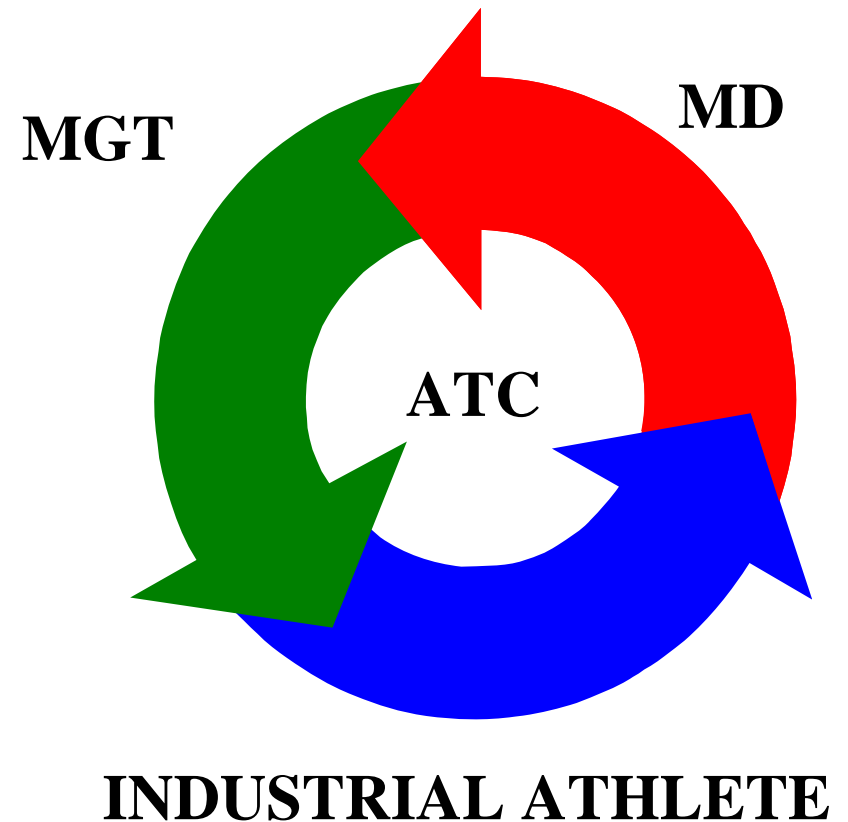
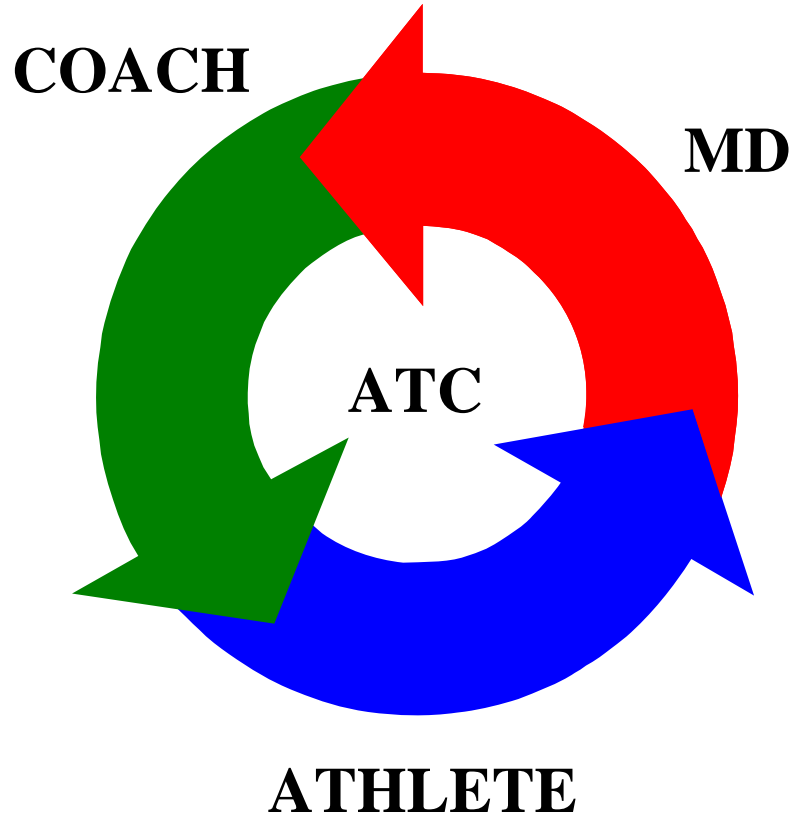
KSC RehabWorks was established in 1997 to provide free **on-site physical medicine and rehabilitation** for work, non-work, or sports-related injuries and post-surgical cases.

The Industrial Athlete

The RehabWorks' philosophy is to treat the employees as athletes.

The mechanism of injury may differ, but the evaluation, treatment and rehabilitation is identical to their counterparts in professional and collegiate sports.

The Sports Medicine Model



The On-Site Advantage

- Prompt treatment for injuries
- Diminished travel time to and from therapy
- Maintenance of the employee's normal work routine during the rehabilitation process
- The unique combination of injury prevention, rehabilitation, education, and fitness/wellness reduces workers' compensation costs while promoting a healthier workforce

A Health Care Asset

- **Success** - Solidly established and multi-faceted health care approach
- **Success** - A NASA best practice facility designation
- **Success** - Assisting contractor organizations in achieving their VPP star certification
- **Success** – Has directly contributed to achieving NASA's civil service and contractor occupational safety metrics (LTIR, LTISR, TCIR, DARCIR, and Type D Mishaps).

A Health Care Asset

- **Success** – Ease of availability to athletic trainers over the past 12 years.
- **Success** - Through direct care and educational outreach activities to employees, the staff is a ready source of medical information.
- **Success** - Acting as a health care advocate to the employee in assisting communication between physicians, case managers and safety and industrial hygiene personnel.



Through the years...



KSC RehabWorks - 1997

100 sq. ft. within O&C Fitness Center



KSC RehabWorks - 1998

400 sq. ft. Space [O&C 1103]



KSC RehabWorks - 1998

400 sq. ft. Space [O&C 1103]



KSC RehabWorks - 1999
400 sq. ft. space [O&C 1103]
400 sq. ft. space [O&C Fitness Center]



KSC RehabWorks - 1999
400 sq. ft. space [O&C 1103]
400 sq. ft. space [O&C Fitness Center]



KSC RehabWorks 2004 - Present
1100 sq. ft. [O&C 1135-1139]
400 sq. ft. space [O&C 1103]







DANGER
ATHLETIC
TRAINER AHEAD

878-878
MADE IN CHINA

NOT





KSC Fitness Center Utilization



Functional Training



Cardiovascular Conditioning



Advanced Strength Training









WHAT CAN RehabWorks DO FOR YOU?

ACUTE INJURIES

An injury that has occurred within the last 24 hours. It is the initial phase of the injury process. Patient usually experiences increased pain, swelling, redness, bruising and loss of function or range of motion.

Examples: Sprained ankle, strained low back muscles, bursitis, immediate swelling in joints, contusions, and new numbness or tingling in extremities.

| Goals at RehabWorks | Treatments |
|--------------------------------|--|
| Decrease Pain | Rest, Ice, Brace, Pulsed Ultrasound and Electrical Stimulation |
| Decrease Inflammation | Rest, Ice, Compression, Elevation and Electrical Stimulation |
| Decrease Muscle Spasm | Ice and Electrical Stimulation |
| Control Edema (swelling) | Ice, Compression, Elevation, and Electrical Stimulation |
| Control Ecchymosis (bruising) | Ice, Compression, Elevation |
| Maintain Range of Motion (ROM) | Gentle passive ROM |

NO EXERCISE OR LIFTING DURING THIS PHASE

CHRONIC INJURIES

An injury that has occurred or pain that has gradually developed at least 4- 6 weeks ago. Consists of pain but minimal to zero bruising, swelling or deformities. Pain is more constant, increasing with certain motions. The pain affects your activities of daily living.

Examples: Low Back Pain, Carpal Tunnel Syndrome, Plantar Fasciitis, Tennis Elbow, Shoulder Impingement, Cumulative Trauma Disorder, Degenerative Disc Disease, Tendinitis, etc.

| Goals at RehabWorks | Treatments |
|-----------------------------------|--|
| Decrease Pain | Moist Heat, Ice, Electrical Stim, Massage |
| Increase ROM | Moist Heat, Joint Mobilization, Active and Passive ROM Exercises, Ultrasound |
| Increase Functional Exercise | Introduce injury specific exercises –dumbbells, therabands, machine weights, cardio equipment |
| Increase Proprioception | Balance Exercises, Wobble Boards |
| Improve Body Mechanics/Ergonomics | Postural exercises, flexibility and ergonomic evaluation of workstation (done by Industrial Hygiene) |

PRE OPERATIVELY

Rehabilitation prior to surgery. The focus is on muscular function/development and range of motion in order to prevent atrophy (loss of muscle) and adhesions in joints. Prehab is most commonly done for knee and shoulder operations such as ACL reconstruction or rotator cuff /impingement surgeries.

| Goals at RehabWorks | Treatments |
|----------------------------|--|
| Maintain ROM | Obtain the most ROM possible prior to surgery through joint mobilization and passive/active ROM techniques. |
| Muscle Development | Obtain and maintain muscle development. Prevent muscle atrophy with electrical stimulation. Provide key muscular development exercises such as for the quad and hamstrings for knee surgeries and the rotator cuff for shoulder surgeries. |
| Pain/Inflammation Control | Ice, Electrical Stimulation and Compression |

POST OPERATIVELY

Post op rehabilitation is a huge part of a successful surgery. RehabWorks is prepared to treat you the day after surgery with dressing changes and initial care. Each surgery is followed by an injury specific protocol to safely and successfully guide you through your rehabilitation process. Please be aware that proper referrals are needed by your physician in order to set up your rehabilitation appointments. Contact RehabWorks at 321-867-7497 or <http://rehabworks.ksc.nasa.gov>

ACUTE INJURIES

CHRONIC INJURIES

PRE OPERATIVELY

POST OPERATIVELY



KENNEDY SPACE CENTER

Mail Code B10-10
Kennedy Space Center, FL 32899
(407) 867-7497
Fax: (407) 867-1144

Patient _____ Date _____

Phone (H) _____ (W) _____ Date of Onset _____

Diagnosis _____

Precautions/Limitations _____

____ Evaluate and Treat

FREQUENCY OF TREATMENT:

____ As needed ____ X week ____ instruct in HEP

Duration of Rx _____ Next Appointment _____

Mary K. Kirkland, ATC/L, CSCS
License No. 0000046

Erik T. Nason, MS, ATC/L, EMT
License No. 0000002

Comments/Special Instructions:

Physician Name (Please Print) _____ Phone No. _____

Physician Signature _____ Date _____

KSC FORM 16-542-NS (REV 1-98)



KENNEDY SPACE CENTER

Mail Code B 10-10
Kennedy Space Center, FL 32899
(407) 867-7497
Fax: (407) 867-1144



MON-FRI 8:30 AM TO 5:00 PM, Room 1103, O&C Bldg.

Common Diagnoses Treated

- Adhesive Capsulitis
- Osteoarthritis
- Degenerative Joint Disease
- Myofascial Pain Syndrome
- Low Back Pain
- Herniated Disc/Sciatica
- Strains and Sprains
- Rotator Cuff Tears
- Shoulder Impingement
- Plantar Fasciitis
- Epicondylitis
- Carpal Tunnel Syndrome
- Contusions
- Chondromalacia

Common Surgical Cases

- Meniscectomy
- Rotator Cuff Repairs
- Subacromial Decompression/Mumford
- ACL Reconstruction
- Lumbar/Cervical Fusion
- Diskectomy
- Total Joint Replacement
- Achilles Tendon Repair
- Biceps Rupture Repair
- Carpal Tunnel Release
- Ulnar Nerve Transposition
- Labrum Repair
- Fracture ORIF

Patient Information

Today's Appts.

Enter New Patient

Progress Note

D/C Notice

Rx/Wait List Log

Patient Data

Injury Data

FIND Patient



Reports

Print Daily Notes

Patient Summary

Tx Charges

References

Physicians - WC Reps - Clinics

Injury Categories

Patient Costs

Anatomy

Medical Terms

Forms

Generic FAX Form

D/C FAX Form

Patient Data Form

MedHx Form

Outcome Assess Form

P Daily Note Form

System Administrator/Developer: Amy L Rembert, 867.7497
09.19.2005; Version 2.0



PATIENT DATA FORM

| | | | |
|-----------------|----------------------|--|---|
| First Name: | <input type="text"/> | Social Security# - last 6 digits only: | <input type="text"/> |
| Middle Initial: | <input type="text"/> | Date of Birth: | <input type="text"/> |
| Last Name: | <input type="text"/> | Age: | <input type="text"/> |
| Nickname: | <input type="text"/> | Gender: | Male <input type="radio"/> Female <input type="radio"/> |
| Employer: | <input type="text"/> | Building/Room: | <input type="text"/> |
| Mail Code: | <input type="text"/> | Shift: | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> TDY |
| Work Phone: | <input type="text"/> | Job Description: | <input type="text"/> |
| Cell Phone: | <input type="text"/> | Supervisor's Name: | <input type="text"/> |
| Home Phone: | <input type="text"/> | Supervisor's Phone: | <input type="text"/> |
| Fax: | <input type="text"/> | | |
| Work email: | <input type="text"/> | | |

Have you ever been to RehabWorks before?: YES ☐ NO ☐

Place injured: ☐ Home ☐ Work ☐ Sport ☐ Other

Is this a Workers' Comp Injury: YES ☐ NO ☐

COMPLETE THIS SECTION ONLY IF THIS IS A WORKERS' COMP INJURY

| | |
|----------------------|----------------------|
| Workers' Comp Name: | <input type="text"/> |
| Workers' Comp Phone: | <input type="text"/> |
| Workers' Comp Fax: | <input type="text"/> |

Statement of Consent for Release of Information

I authorize RehabWorks to release the medical information contained in my patient records pertaining to the workers' compensation injury for which I am currently being treated by RehabWorks to my physician and/or workers' compensation representative for the purpose of progress notes and/or case management.

Employee Signature _____ Date _____



Medical History Form

Name: _____

Date: _____

Do you currently have or have you had problems with:

Please provide details

| | | |
|--|--------------------------|----------|
| <input type="radio"/> Yes <input type="radio"/> No | Angina/Chest pain | |
| <input type="radio"/> Yes <input type="radio"/> No | Arthritis | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Asthma | |
| <input type="radio"/> Yes <input type="radio"/> No | Back Injury | Type: |
| <input type="radio"/> Yes <input type="radio"/> No | Balance problems | |
| <input type="radio"/> Yes <input type="radio"/> No | Blackout/Fainting | |
| <input type="radio"/> Yes <input type="radio"/> No | Bleeding problems | |
| <input type="radio"/> Yes <input type="radio"/> No | Blood clots or Phlebitis | |
| <input type="radio"/> Yes <input type="radio"/> No | Bone Fractures | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Cancer | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Cardiac Catheterization | |
| <input type="radio"/> Yes <input type="radio"/> No | Cough | |
| <input type="radio"/> Yes <input type="radio"/> No | Diabetes | Type: |
| <input type="radio"/> Yes <input type="radio"/> No | Dislocation/Subluxation | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Epilepsy/Seizures | |
| <input type="radio"/> Yes <input type="radio"/> No | Gout | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Heart Attack | |
| <input type="radio"/> Yes <input type="radio"/> No | Heart Failure | |
| <input type="radio"/> Yes <input type="radio"/> No | Heart Murmur | |
| <input type="radio"/> Yes <input type="radio"/> No | Heart Valve problems | |
| <input type="radio"/> Yes <input type="radio"/> No | Heartburn | |
| <input type="radio"/> Yes <input type="radio"/> No | Hepatitis/Jaundice | |
| <input type="radio"/> Yes <input type="radio"/> No | Hernias | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | High Blood Pressure | |
| <input type="radio"/> Yes <input type="radio"/> No | Infectious Disease | |
| <input type="radio"/> Yes <input type="radio"/> No | Kidney problems | |
| <input type="radio"/> Yes <input type="radio"/> No | Migraines/Headaches | |
| <input type="radio"/> Yes <input type="radio"/> No | Motor Vehicle Accident | |
| <input type="radio"/> Yes <input type="radio"/> No | Neck Injury | Type: |
| <input type="radio"/> Yes <input type="radio"/> No | Numbness/Tingling | Area(s): |
| <input type="radio"/> Yes <input type="radio"/> No | Osteoporosis/Osteopenia | |
| <input type="radio"/> Yes <input type="radio"/> No | Palpitations | |
| <input type="radio"/> Yes <input type="radio"/> No | Prednisone usage | |
| <input type="radio"/> Yes <input type="radio"/> No | Prior Cardiac Surgery | |
| <input type="radio"/> Yes <input type="radio"/> No | Prostate | |
| <input type="radio"/> Yes <input type="radio"/> No | Scoliosis | |
| <input type="radio"/> Yes <input type="radio"/> No | Shortness of breath | |
| <input type="radio"/> Yes <input type="radio"/> No | Sprain (ligament) | |
| <input type="radio"/> Yes <input type="radio"/> No | Stomach ulcers | |
| <input type="radio"/> Yes <input type="radio"/> No | Strain (muscle/tendon) | |
| <input type="radio"/> Yes <input type="radio"/> No | Stroke | |
| <input type="radio"/> Yes <input type="radio"/> No | Tuberculosis | |
| <input type="radio"/> Yes <input type="radio"/> No | Other | |

Additional Comments: _____

Injury History

_____ Onset of symptoms

Briefly describe why you're being treated at RehabWorks:

☐ N/A Medications

Please list any prescription or over-the-counter medicines that you are currently taking:

☐ N/A Allergies

Please list any known allergies to medications:

☐ N/A Past Surgical History

| Surgery: | Year: | Surgery: | Year: |
|----------|-------|-----------|-------|
| 1. _____ | _____ | 6. _____ | _____ |
| 2. _____ | _____ | 7. _____ | _____ |
| 3. _____ | _____ | 8. _____ | _____ |
| 4. _____ | _____ | 9. _____ | _____ |
| 5. _____ | _____ | 10. _____ | _____ |

Exercise History

Please select one: ☐ Daily ☐ Weekly ☐ Monthly ☐ Rarely ☐ Never

Type of Exercise/Physical activity: _____

Smoking History

Currently Smoking? ☐ Yes ☐ No _____ packs/day for _____ year(s)

Quit Smoking? ☐ This year ☐ >1 ☐ >5 years ☐ >10 years

Previously Smoked _____ packs/day for _____ year(s)

Medical Hx Reviewed by _____ MS, ATC, LAT Date _____

Reviewed by Supervising Physician _____ Date _____

Patient Data

TODAY's appts

Medical Hx

MENU

Record:

2

Found:
2

Total:
3049

Unsorted



New



Delete



Find



Find ALL
Records



Re-establish
Patient



Copy & paste text below to
RehabPatient Number upon
NEW record creation.

First Name:

Middle Initial:

Last Name:

Nickname:

Employer:

Mail Code:

Work Phone:

Cell Phone:

Home Phone:

Fax:

Work E-mail:

SS# (last 6 digits only):

DOB:

Age:

Gender:

☐ Male ☐ Female

Building/Room:

Shift:

☐ 1 ☐ 2 ☐ 3 ☐ TDY

Job Description:

Supervisor's Name:

Supervisor's Phone:

DO NOT enter HYPHENS

Has patient ever been to RehabWorks before?:

☐ Yes ☐ No

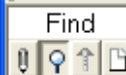
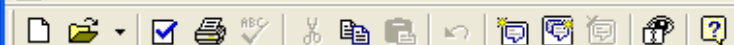
Injury Hx Other



Enter/Update
Eval Med HX

| Injury ID#: | Age @ Injury | Injury Category: | Sub-body part: | Physician: | DOI: | D/C Date: |
|-------------|--------------|------------------|----------------|------------|------|-----------|
| V | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

To enter a CONSL
Type body part in
Select 'Enter'
An injury id# will
Click on the "V" t


 Find
 Layout:
 PTF - Prc


Request:

1

Total:

1

Qmit ☐

Symbols

Find



PROGRESS NOTE

Dear: _____ Date: _____ Injury ID #: _____

Thank you for referring this patient. The patient's treatment regime and status are indicated below:

Patient: _____ No. of Visits: _____ No. Weeks S/P: _____

SSN: _____ Diagnosis: _____ Type: _____

MODALITIES ADMINISTERED

 Heat/Cold ☐
 U.S./E-stimulation ☐
 Massage/Mobilization ☐
 Whirlpool: Hot/Cold ☐
 Cryo Compression ☐
 Iontophoresis ☐

THERAPEUTIC EXERCISE

 PROM/AROM/AAROM ☐
 Isometric/Isotonic ☐
 Theraband ☐
 UBE ☐
 Cardiovascular Ex. ☐

EDUCATIONAL

 Posture/Body Mechanics ☐
 ADL/Home Exercises ☐

PAIN SCALE Initial: (/10)

Present: (/10)

TESTING:

| | | |
|--|--|--|
| | | |
|--|--|--|

Assessment:

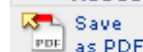
Recommendation:

Please call me with any comments/questions regarding this patient.

Sincerely,

MS, ATC, LAT

MENU

[Patient Data](#)
[Injury Data](#)
[Medical Hx](#)
[Tx Charges](#)
[D/S Initial](#)
[D/S Exit](#)
[D/C Notice](#)
[Fax Form](#)
[Outcome Assess](#)

[Find](#)
[NEW PN](#)
[PRINT](#)



Find

Layout:

PTF - Dis



Request:

1

Total:

1

Qmit

Symbols

Find



PATIENT DISCHARGE NOTICE

Injury ID:

Referral Physician: Date: Total # pgs.: Clinic: Phone: Fax: WC Rep: Phone: Fax: Patient Name: SS#: Rx Date: 1st Appt: D/C Date: # Appointments Kept: vs. NS/C/RS: DOI: D.O.S.:

Reason for Discharge:

- ☐ No/minimal c/o pn/sx ☐ D/C to IEP/HEP/FC ☐ MD requested D/C ☐ Transfer to outside rehab
☐ No further appts. made ☐ Rx to MD/PT ☐ Work constraints ☐ Rx completed
☐ Return to full duty ☐ Pt requested release ☐ Personal Constraints ☐ Left against medical advice

One-time Treatment/Release: Treatment Given:

- ☐ Ice/Heat ☐ Ther. Ex ☐ WF ☐ US ☐ Self/home care ☐ E-stim ☐ Consultation ☐ Massage

OBJECTIVE:Type

Additional comments by:

Pre Post

PAIN SCALE:

ATC Signature:

MS, ATC, LAT

Important Notice to Recipient: Please do not read, copy or disseminate this communication or any attachment unless you are the intended addressee. This communication may contain confidential information intended only for the addressee(s). Anyone who receives this communication in error should treat it as confidential and is asked to contact the sender at the e-mail, phone number or fax number listed above. Please do not forward or disseminate this information to any third party.

MENU

Patient Data

Injury Data

Tx Charges

Appts.

Progress Note

D/S Initial

D/S Exit

Fax Form

Out Assess't

To discharge an EVAL:

- 1) Click green DISCHARGE button below
- 2) Put date into D/C Date field
- 3) Under Reason for Discharge click on applicable reason

To discharge a CONSULT:

- 1) Click green DISCHARGE button below
- 2) Put date into D/C Date field
- 3) Under One-time Tx/Release click on any that are applicable
- 4) Click on CONSULT below to continue w/ consult

Click to
continue
CONSULT

DISCHARGE

PRINT

LOCK RECORD

The Impact of KSC RehabWorks on Organizational Cost Avoidance and Return on Investment Strategies



KSC RehabWorks Patient Visits

| YEAR | 1QTR | 2QTR | 3QTR | 4QTR | TOTAL |
|----------|------|------|------|------|-------|
| 1998 | 326 | 385 | 445 | 336 | 1492 |
| 1999* | 667 | 597 | 671 | 624 | 2559 |
| 2000 | 617 | 770 | 934 | 875 | 3196 |
| 2001 | 849 | 988 | 781 | 677 | 3295 |
| 2002 | 626 | 767 | 840 | 703 | 2936 |
| 2003** | 810 | 738 | 784 | 832 | 3164 |
| 2004*** | 857 | 803 | 647 | 751 | 3058 |
| 2005**** | 788 | 817 | 1149 | 831 | 3585 |
| 2006 | 810 | 761 | 768 | 740 | 3079 |
| 2007 | 753 | 735 | 680 | 712 | 2880 |
| 2008 | 800 | 768 | 799 | 641 | 3008 |

*FC Expansion (2nd RehabWorks Expansion) ** Loss of Columbia

*** 3rd RehabWorks Expansion **** Part-Time ATC (4Q '04 - 1Q '06)

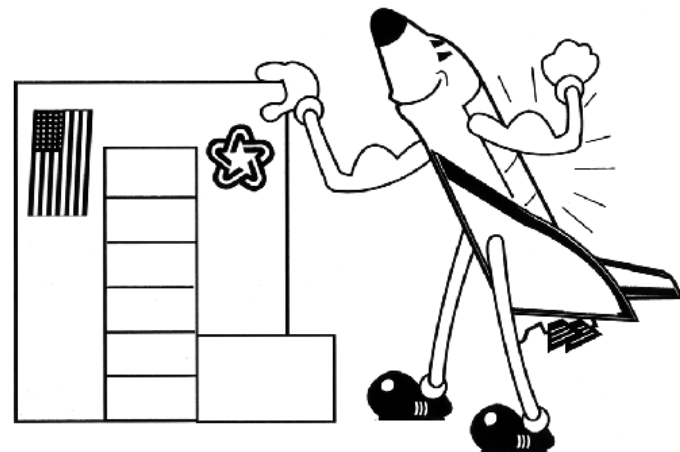
| | Total New Patients | Total Consults | Total Visits | Workforce Productive Manhours Saved Due to Onsite Access | Workforce Payroll Savings Due to Onsite Access | Offsite Therapy Cost Avoidance | MD Visit / Diagnostic Savings | Total Cost Avoidance |
|-----------------|--------------------------|-------------------|-----------------|---|---|---|-------------------------------------|-------------------------|
| WC - 1QTR 08 | 25 | 1 | 143 | 429 | \$ 36,465 | \$ 10,010 | \$ 650 | \$ 47,125 |
| NWC - 1QTR 08 | 71 | 38 | 657 | 1971 | \$ 167,535 | \$ 45,990 | \$ 24,700 | \$ 238,225 |
| QUARTERLY TOTAL | 96 | 39 | 800 | 2400 | \$ 204,000 | \$ 56,000 | \$ 25,350 | \$ 287,750 |
| WC - 2QTR 08 | 24 | 1 | 130 | 390 | \$ 33,150 | \$ 9,100 | \$ 650 | \$ 42,900 |
| NWC - 2QTR 08 | 54 | 41 | 637 | 1911 | \$ 162,435 | \$ 44,590 | \$ 26,650 | \$ 233,675 |
| QUARTERLY TOTAL | 78 | 42 | 767 | 2301 | \$ 195,585 | \$ 53,690 | \$ 27,300 | \$ 276,575 |
| WC - 3QTR 08 | 24 | 1 | 106 | 318 | \$ 27,030 | \$ 7,420 | \$ 650 | \$ 35,100 |
| NWC - 3QTR 08 | 71 | 40 | 693 | 2079 | \$ 176,715 | \$ 48,510 | \$ 26,000 | \$ 251,225 |
| QUARTERLY TOTAL | 95 | 41 | 799 | 2397 | \$ 203,745 | \$ 55,930 | \$ 26,650 | \$ 286,325 |
| WC - 4QTR 08 | 25 | 1 | 153 | 612 | \$ 77,112 | \$ 10,710 | \$ 650 | \$ 88,472 |
| NWC - 4QTR 08 | 38 | 30 | 488 | 1952 | \$ 245,952 | \$ 34,160 | \$ 19,500 | \$ 299,612 |
| QUARTERLY TOTAL | 63 | 31 | 641 | 2564 | \$ 323,064 | \$ 44,870 | \$ 20,150 | \$ 388,084 |
| CY08 TOTAL | 332 | 153 | 3007 | 9662 | \$ 926,394 | \$ 210,490 | \$ 99,450 | \$ 1,236,334 |

The Benefits of Onsite Access to Health Care

- **Savings – Payroll Savings**
 - Based on an **average** loaded salary of \$85, multiplied by an estimated **3 work hours** saved per visit, **the total workforce payroll savings for not having to travel to an off-site physical therapy clinic was \$3,612,284.**
- **Savings - Lost Man Hours Decreased**
 - By estimating 3 work hours saved per visit, **the total productive workforce man hours saved for not having to travel to an off-site physical therapy clinic was 96,102 hours.**

The Benefits of Onsite Access to Health Care

- **Savings – Decrease Claim Costs**
 - The total Treatments provided for 32,034 patient appointments, **the total savings for organizations not having to file a claim for rehabilitative services was \$4,106,555.**
- **Savings – Total Cost Avoidance**
 - *Since program inception in 1997, the total cost savings is **\$8,199,619.***

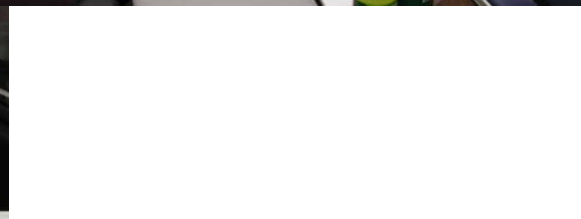


Total Return on Investment

In addition to the monetary savings, this program provides the **intangible benefits** of improved employee morale, enhanced case management, and reduced secondary referrals that contribute significantly to the organizational benefits received by this convenient, onsite physical medicine and musculoskeletal rehabilitation program.

Educational Outreach and Preventive Services





Unpreventable Causes:

- Muscle Spasms
- Bone Spurs
- Spinal Abnormalities
- Leg Length Differences
- Birth Defects
- Metabolic Changes or Problems
- Infection
- Tumors
- Psychosomatic Problems
- Accidents

Preventable Causes:

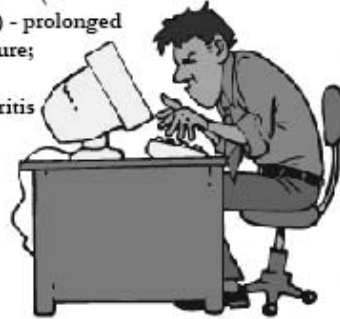
(RISK FACTORS WHICH HAVE A CUMULATIVE EFFECT):

- Poor Posture (slouched sitting, sway back, flat back)
- Faulty Body Mechanics (improper lifting, twisting without pivoting, etc.)
- Stressful Living and Working Habits (work too low or far away; reaching with a heavy load; back unsupported; mattress too hard or too soft)
- A General Decline of Physical Fitness (overweight, inflexible, lack of upper/lower body strength)



The Most Common Back Disorders:

- Muscle guarding/spasm - a result of some type of injury
- Disc strain or bulge - forward bending/lifting, slumped sitting
- Disc herniation - same as above
- Acute strains/sprains - improper lifting, twisting; falls, auto accidents
- Postural strains/sprains - head forward; slumped sitting; forward leaning, etc.
- Joint stiffness (lack of flexibility) - prolonged poor posture; injury
- Osteoarthritis



Contact Us To Setup Training Today!



Did You Know That...

- 8 of 10 people will experience back pain some time during their life.
- 70% of those injured will have a recurrence of back pain or injury.
- Annually, over 25 billion dollars is spent treating industrial back injuries.
- Almost all back disorders are the result of:
 - Poor posture
 - Faulty body mechanics
 - Stressful living and working habits
 - A general decline of physical fitness



Do You Want To...



- Reduce back injuries?
- Decrease workers' comp costs?
- Decrease lost days due to back pain?
- Increase quality and productivity?
- Take advantage of a convenient, on-site back training program that is free of charge?

National Aeronautics and Space Administration

Kennedy Space Center
Mail Code B10-8
Kennedy Space Center, FL 32899
321-867-7497 • 321-867-1144 (fax)
<http://rehabworks.ksc.nasa.gov>

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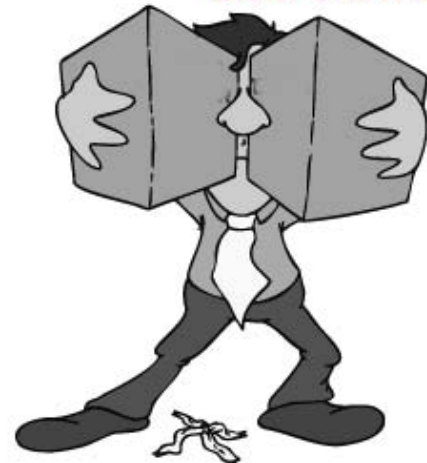
www.nasa.gov

NP-2007-03-008-KSC

National Aeronautics and
Space Administration



Back@Work



PROPER LIFTING TECHNIQUES



Don't Twist...



Pivot.



Don't Bend Your Back...



Kneel or Squat.



Keep the Weight Close.



You Have to Know More About Lifting than Bend Your Knees. If Your Knees are in the way, It Is Still Wrong!

321-867-7497  **RehabWorks KSC**
<http://rehabworks.ksc.nasa.gov>

PROPER LIFTING TECHNIQUES

Lifting with the Back Bent



Knees in the Way



The Diagonal Lift



The Tripod Lift



321-867-7497  **RehabWorks KSC**
<http://rehabworks.ksc.nasa.gov>



EARLY RECOGNITION & TREATMENT



Early Recognition & Treatment of Injuries

When it comes to injury recognition and treatment, the old adage of "no pain, no gain" DOES NOT APPLY! Whether an injury is acute or chronic, there is never a good reason to try to "work through" the pain of an injury. When you have pain from a particular movement or activity, STOP! Continuing the activity only causes further harm. Some injuries require prompt medical attention while others can be self-treated. Here's what you need to know about both types:

You should call a health professional if:

- The injury causes severe pain, swelling, or numbness
- You can't tolerate any weight on the area
- The pain or dull ache of an old injury is accompanied by increased swelling or joint abnormality or instability.

Follow these four steps immediately after injury and continue for at least 48 hours:

- **Rest.** Reduce regular exercise or activities of daily living as needed. If you cannot put weight on an ankle or knee, crutches may help. If you use a cane or one crutch for an ankle injury, use it on the uninjured side to help you lean away and relieve weight on the injured ankle.
- **Ice.** Apply an ice pack to the injured area for 15-20 minutes at a time, four to eight times a day. A cold pack, ice bag, or plastic bag filled with crushed ice and wrapped in a moist towel can be used. To avoid cold injury and frostbite, do not apply the ice for more than 20 minutes. (Note: Do not use heat immediately after an injury. This tends to increase internal bleeding or swelling. Heat can be used later on to relieve muscle tension and promote relaxation.)
- **Compression.** Compression of the injured area may help reduce swelling. Compression can be achieved with elastic wraps, special boots, air casts, and splints. Ask your health care provider for advice on which one to use.
- **Elevation.** If possible, keep the injured ankle, knee, elbow, or wrist elevated above the level of the heart to help decrease swelling.

Further questions?

Ask your RehabWorks Certified Athletic Trainer (ATC) who can help you minimize your chance of injury.

BIO-8, Kennedy Space Center, FL 32899
<http://rehabworks.ksc.nasa.gov>
 321-867-7497



Presented by the Bionetics Corporation



DO YOU HAVE LOW BACK PAIN?

It could be caused by sciatica.

What is sciatica?

Sciatica is a general term used for any inflammation or compression involving the sciatic nerve. Sciatica involves pain, discomfort, weakness, and numbness associated with the sciatic nerve. These pains can be felt from the hip all the way down to the toes. Sciatica is often associated with low back pain, which afflicts every adult from time to time.

Where is the sciatic nerve?

The sciatic nerve branches off of the lower part of your spinal cord (the lumbar region), passes the hip joint, goes down the buttocks and runs down the back and side of the leg down to the foot. The nerve is the largest and longest nerve in the body, its thickness is about the same as a person's thumb.

What are some causes and symptoms of sciatica?

CAUSES: Sciatica is usually caused by the sciatic nerve being compressed or the nerves passageway being narrowed. Compression can occur from:

- A back strain
- Spasms in the back muscles
- Bulging disk
- Impingement between the vertebrae
- Sprained ligament
- Piriformis syndrome

The nerves passage way can be narrowed by:

- Arthritis
- Scar tissue
- Swelling

In rare cases sciatica can be caused by:

- Infection
- Cancerous or non-cancerous tumors
- An abscess
- A Blood clot
- A growth pressing on the nerve

A very often-overlooked cause of sciatica is

piriformis syndrome.

The piriformis is a deep muscle that lies under the buttocks muscles. After the sciatic nerve crosses through the hip joint it passes under the piriformis muscle. If this muscle is injured, has a spasm, or is tight, it can place a great deal of pressure on the sciatic nerve, which ends up compressing it.

Emergency signs:

- Loss of control of the bladder or bowels
 - Increasing weakness in the lower extremity
 - Drop foot, the inability to dorsiflex the foot
- If any of these occur you should seek medical attention at once.

SYMPTOMS: Some people may experience low back pain but the most common symptom is radiating pain that starts on one side of the buttocks and radiates down the leg. Many people describe the pain as:

- Burning
- Aching
- Prickling
- Tingling
- Stabbing
- "pins and needles" sensation

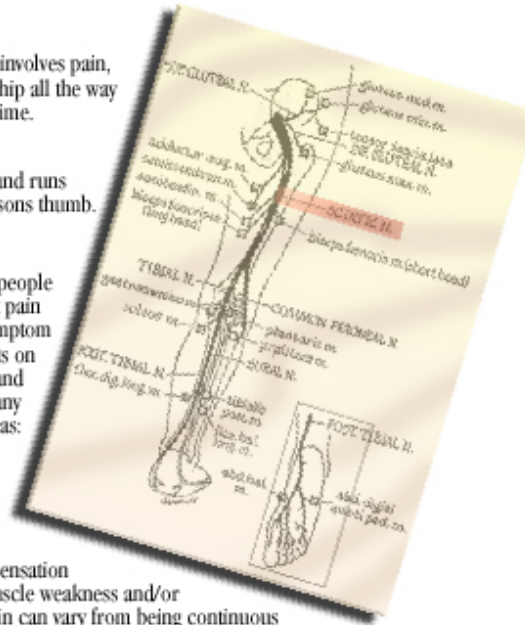
Some may experience muscle weakness and/or difficulty walking. The pain can vary from being continuous or sporadic.

What are some treatment options for sciatica?

For acute pain the initial treatment focuses on pain relief. This can include:

- The use of non-steroidal anti-inflammatory drugs (NSAID's) such as ibuprofen
- Muscle relaxants
- If necessary bed rest
- Ice or heat
- Massage therapy
- Rehab, which would consist of stretching and strengthening exercises for the lower back, buttocks, and hamstring muscles

For chronic pain if conservative measures fail, surgery may be required. However, sciatica usually gets better within six weeks.



Stretch



Piriformis Stretch

Save yourself from Sciatica!

Here are some ways to prevent sciatica from occurring:

- Be active, move it or lose it! Being overweight increases your chances of having sciatica.
- Stretch. Stretching will keep the muscles from being tight and having spasms, both which contribute to sciatica.
- Use proper lifting techniques. If you don't you are increasing the chances of having a back strain.
- Sleep on a firm mattress, use chairs with firm back support.
- Sit with your feet flat on the floor. Habitually crossing the legs while can place pressure on the sciatic nerve.
- Take microbreaks throughout the workday, especially if you are sitting for long periods of time.

If you feel you may have this condition and need to see some one, please contact Amy with RehabWorks to set up a consultation.

867-7497  RehabWorks



Wrong Way To Lift Properly...



The Way To Lift Properly...



Right Way...

NATIONAL ATHLETIC TRAINING MONTH

RehabWorks

KENNEDY SPACE CENTER

MARCH 2003 AGENDA

Week
1



CARING FOR YOUR YOUTH ATHLETE*

Thursday, March 6, 2003

11:00 am - 1:00 pm @ O&C Mission Briefing Room

- Injury Prevention • Weight Training & Conditioning • Nutrition/Supplements

Week
2

ATHLETIC TRAINING & MOTORSPORTS

Monday, March 10, 2003

9:00 am - 2:00 pm @ East O&C Lot

- Sportsmedicine Center for IMSA
- Race Car Exhibits • Safety Gear
- Understanding Drivers as Athletes



Week
3

PREVENTION & CARE OF MUSCULOSKELETAL INJURIES CLINIC

Thursday, March 20, 2003

11:00 am - 1:00 pm @ O&C Mission Briefing Room

- Basic Neck & Back Care • Immediate Injury Care • Basic Wound Care
- Wrapping & Taping Technique • Workstation Design/Microbreaks
- Heat Illness/Fluid Replacement



Six, 20 Minute
Hands On Sessions



Week
4

ATHLETIC TRAINING EXPO*

Thursday, March 27, 2003

9:00 am - 2:00 pm

@ O&C Mission Briefing Room

- Multiple Vendors • Exhibits
- Information • Door Prizes



***Alternate site for events will be O&C Aerobics Room**

For more information, call 867-7497 or visit our webpage: <http://rehabworks.ksc.nasa.gov>

INJURY RED FLAGS

Important Facts on Treating Acute Injuries

IN THE BLEACHERS

BY STEVE MOORE

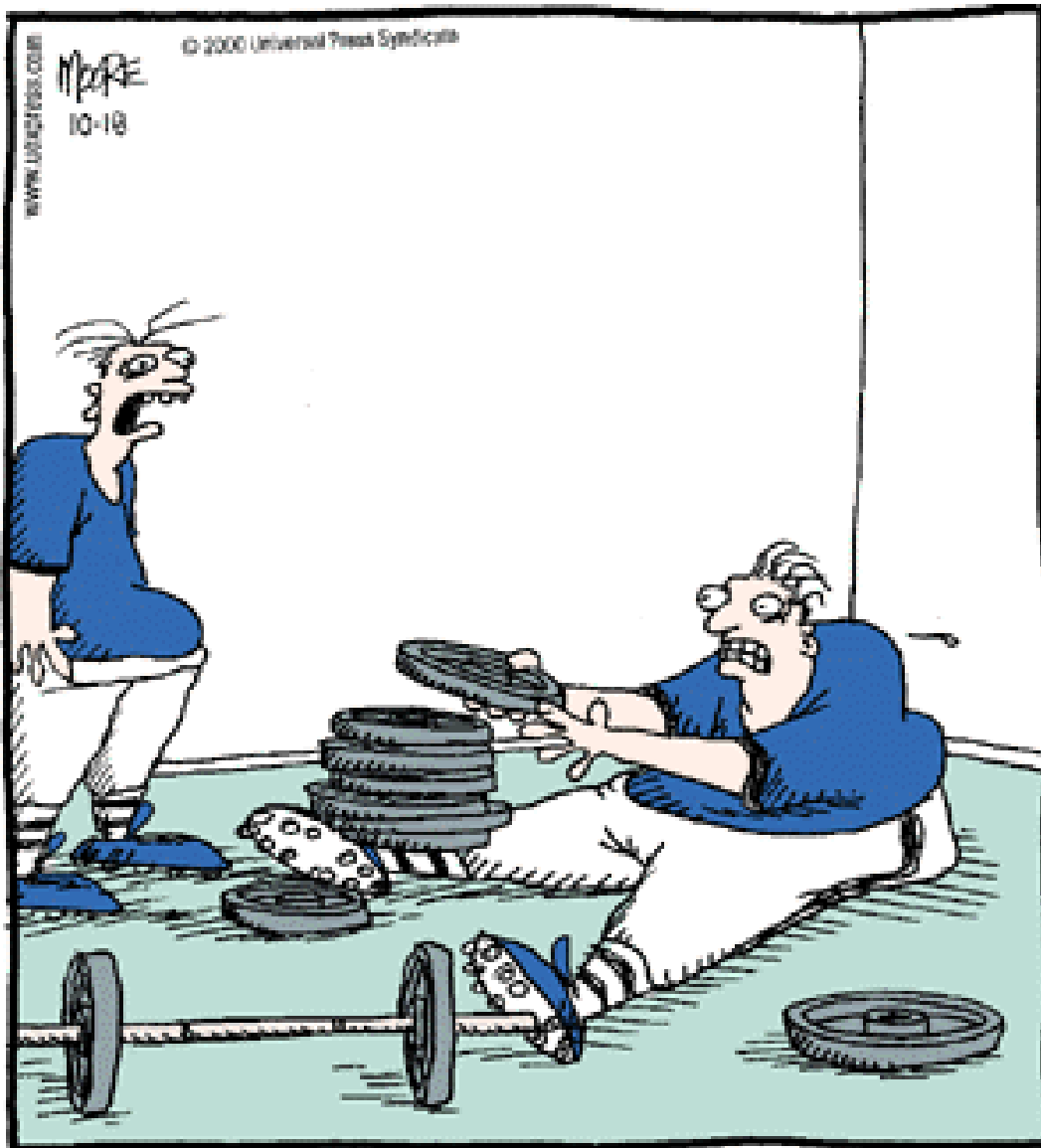


Signs of Inflammation

- Redness
- Heat/Warmth
- Swelling
- Pain
- Loss of Function



"Calm down. Maybe you tore ligaments and maybe you didn't. ... Does it hurt when I bend your leg like this?"



Acute
Care of
Injuries...

R.I.C.E.

"I don't know if that's such a good
idea, Louie. Doc said to keep weight off
the ankle until it heals."

HEAT

WHEN TO USE:

- After 72 Hours
- Muscle Relaxation
- Joint Stiffness
- Subacute-After swelling is gone
- Chronic Injuries
- Increases Range of Motion

WHEN NOT TO USE:

- Fever
- Impaired Sensation
- Infection
- Injury is Bleeding
- Peripheral Vascular Disease
- Cardiovascular Disease*

* If you have any cardiovascular condition,
DO NOT use a full body whirlpool.

TECHNIQUES:

- Moist Heat Pack (low-med)** 30-45 minutes
 - Whirlpool (98-105°) 20-30 minutes
- ** Place a wet cloth covered by plastic over the injured area to make a dry heating pack moist

Contact the RehabWorks Staff if you have any questions regarding injury prevention and healing.
(321) 867-7497 • <http://rehabworks.ksc.nasa.gov>



ICE

WHEN TO USE:

- First 72 Hours
- Contusions
- Swelling
- First Degree Burns
- Acute Injuries
- Sprains
- Discoloration

WHEN NOT TO USE:

- Raynaud's Disease
- Impaired Sensation
- Cardiovascular Disease*
- Peripheral Vascular Disease
- Low Tolerance to Cold
- Uncovered Wound

* If you have any cardiovascular condition,
DO NOT use a full body whirlpool.

TECHNIQUES:

RICE: Rest, Ice, Compression, Elevation

- Ice Pack* - 10-20 minutes
- Ice Bath** (ice and water) - 10-20 minutes
- Ice Cup (massage) - 5-10 minutes

* If needed, place a wet cloth between ice pack and skin.

** Wait ONE hour between treatments to avoid frostbite.

Contact the RehabWorks Staff if you have any questions regarding injury prevention and healing.
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**NATURAL
GOOD POSTURE**



GOOD POSTURE

Head up.
Chin level with floor.
Chest up.
Shoulders relaxed.
Lower abdomen flat.

CENTER LINE

Extends from center of head,
through neck, shoulder, hips,
knees and arches of feet.

BODY WEIGHT

Body weight is balanced along
this center line and supported
by the weight-bearing arches
of the feet.

FIVE DEFECTIVE BODY POSTURES



Stiff-rigid
Poor Posture



Slumped-Humped
Poor Posture



Sway-back or
lordosis (lor-dō'sis)

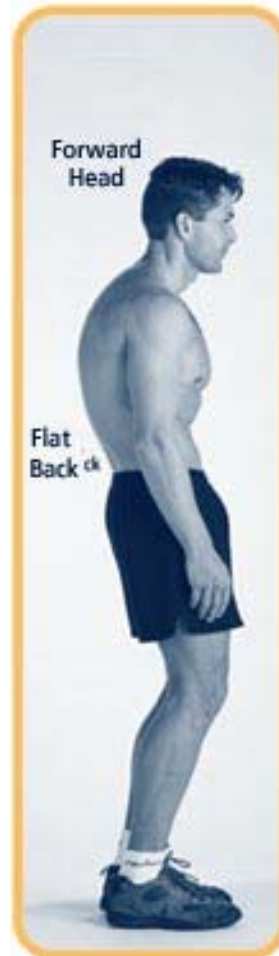


Drooped Shoulders
kyphosis (ki-fō'sis)

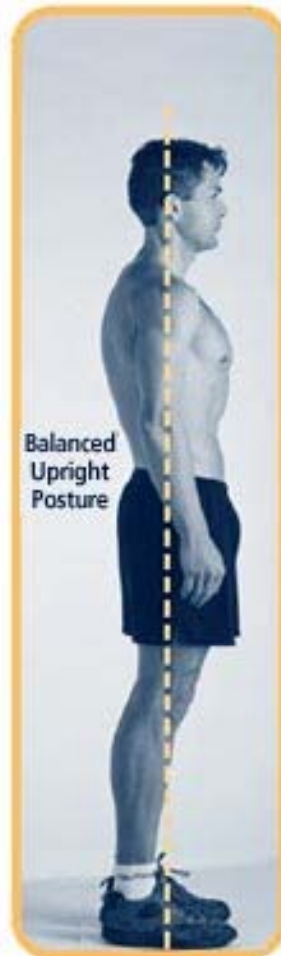


Sway-back and
drooped shoulders
scoliosis (skō-lō'sis)

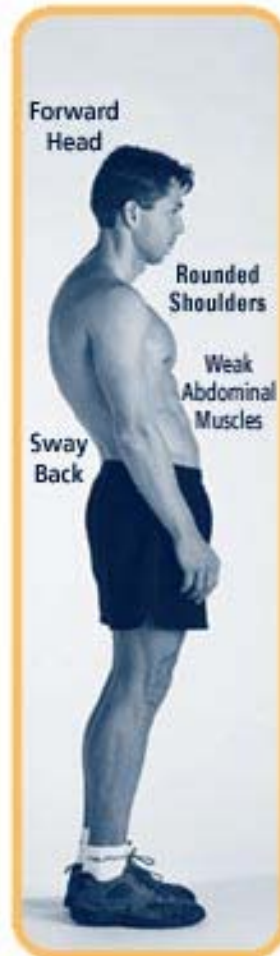
Poor Posture



Good Posture



Poor Posture





LOOK AT YOUR WORKSTATION FROM A DIFFERENT ANGLE!

RehabWorks

The 90° Angles



The Straight Lines



& Remember...



NASA/KSC/BRSC Graphics 2003

Don't Forget Your Microbreaks!

Every 20 - 30 minutes, take a 5 minute break and do your stretching exercises. Here are a few suggested exercises...

Wrist Extension Stretch



Wrist Flexion Stretch



Doorway Stretch



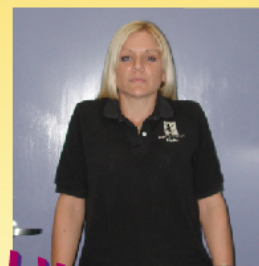
Back Extension



Cervical Stretch



Shrugs



phone 321-867-7497

RehabWorks

<http://rehabworks.ksc.nasa.gov>

DON'T TAKE THE HEAT!

Protect Yourself from Heat Illness - STAY HYDRATED!

Three separate degrees of Heat Illness severity; not necessarily in this progression. It is possible to have heat stroke without ever experiencing heat exhaustion.

Dehydration. Some symptoms include muscle cramps, thirst, loss of energy, diminished performance and headache. Stretching can help relieve muscle cramps. To correct dehydration, drink sports drinks that contain sodium and electrolytes while resting in a shady area.

Heat exhaustion. Some symptoms include headache, nausea, feeling faint or dizzy, cramping, chills, and clammy skin. To treat, rest in a cool area, drink sports drinks and loosen or remove excessive clothing and equipment.

Heat stroke. Characterized by high body temperature, confusion or unconsciousness. Seek emergency medical assistance first and then immediately ice down the body.

Preventing Heat Illness. Acclimation and hydration stand out as the two primary prevention methods for decreasing the risk of heat illness. Acclimation is the process of the body adjusting to heat and humidity when exercising in hot environments. Proper hydration during this time is vital. After you acclimate you sweat more and need more fluids to stay hydrated. If you do not adhere to proper hydration principals you become dehydrated and put yourself at risk for developing heat illness. Other factors affecting heat illness include body size, fitness level, environmental temperature and humidity, uniform and gear.

Many of these risk factors for heat illness can be controlled. Hydration is critical to athletic performance. In fact, fluid losses of as little as 2% of body weight (less than 4 pounds in a 200 lb. athlete) can impair performance by increasing fatigue. This is important because it's common for some athletes to lose between 5-8 pounds of sweat during a game.

Maintain Hydration.

- Drinks with a light flavor and small amount of sodium encourage you to drink, and drinking fluids is the first-line of defense against dehydration.
- They have the right mix and amount of carbohydrates and electrolytes to speed into the bloodstream.
- Keeps you in the game. Helps you avoid dehydration and other problems such as early fatigue, muscle cramps, lightheadedness and heat exhaustion.
- Aid performance. Carbohydrates in sports drinks helps you perform better in both power and endurance.
- Speeds recovery. Carbohydrates and electrolytes help refuel muscles and speed rehydration.

Preventing Cramps.

- Stave off cramps by following these guidelines:
1. Drink plenty of fluids to stay hydrated during exercise;
 2. Replenish sodium levels during times of heavy exercise and sweating with a sports drink.
 3. Adequate nutritional recovery (particularly for salt) and rest for muscles after hard training.

Quick Fixes for Cramps.

During workout or competition, take immediate action:

1. Stretch. Because cramps are often related to a change in weight bearing, stretching and non weight-bearing exercises are effective treatments.
2. Massage the area. Rubbing the cramped muscle may help alleviate pain as well as help stimulate blood flow and fluid movement into the area.
3. Stimulate recovery. Rest and adequate rehydration with fluids containing electrolytes, particularly sodium, will quickly bring improvement.

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For more information on preventing heat illness, contact RehabWorks at 867-7497

RehabWorks
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DON'T TAKE THE HEAT!

Protect Yourself from Heat Illness - STAY HYDRATED!

Dehydration

If you feel like this... Do this...

Loss of Energy & Performance

Choose sports drinks. Drink fluids with carbohydrates to prevent fatigue and provide energy. Small amounts of sodium promote rehydration. Avoid beverages containing caffeine or carbonation. The caffeine can cause further dehydration and carbonation can cause stomach upset.

Muscle Cramps

Stop activity and massage cramped muscles. Choosing a sports drink that contains the right amount of sodium (at least 100mg/8oz) may relieve and prevent muscle cramps

Heat Exhaustion

If you feel like this... Do this...

Dizziness, Light-headedness & cold, clammy skin

Replace fluids, rehydration is critical. Rest in a cool, shaded area until dizziness passes. Stretching may improve circulation and prevent fainting. If dizziness continues, lying with the legs elevated will promote circulation to the head.

Nausea/Headaches

Rest in a cool place until nausea passes. Rehydration is critical; drinking fluids is a must. Lying down is often helpful in relieving headaches.

Heat Stroke

If you feel like this... Do this...

High Body Temperature & Dry Skin

Get out of heat and seek immediate medical treatment. Feeling chilly, with arms tingling and goosebumps, means skin circulation has shut down and heat stroke is imminent.

Confusion or Unconsciousness

Confusion strongly suggests - and unconsciousness basically means - heat stroke. Heat stroke is an emergency that calls for fast cooling with ice baths or any other available means.

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For more information on preventing heat illness, contact RehabWorks at 867-7497

RehabWorks

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Educational Lecture Series

| | DATE | DAY | TIME | TOPIC | LOCATION |
|-----------|----------|----------|-------|--|----------------------------|
| January | 1/30/07 | Tuesday | 10-11 | A Firm Foundation: Healthy Feet | OSB II, Rm 3124 |
| February | 2/27/07 | Tuesday | 1-2 | Knee and Shoulder: Open Forum - Got Questions? | HQ, Rm 2201 |
| March | 3/20/07 | Tuesday | 10-11 | Youth, Sports and Exercise: What You Need To Know | OSB I, Rm 6320 |
| April | 4/26/07 | Thursday | 10-11 | We've Got Your Back: Key Facts About Common Injuries of the Spine | OSB II, Rm 3124 |
| May | 5/31/07 | Thursday | 10-11 | Injury Red Flags: Important Facts on Treating Acute Injuries | KSC Learning Institute |
| June | 6/19/07 | Tuesday | 10-11 | Dehydration Prevention: What You Need to Know About Fluid Intake | SSPF, Rm 3006A |
| July | 7/26/07 | Thursday | 10-11 | Knee and Shoulder: Open Forum - Got Questions? | OSB II, Rm 3124 |
| August | 8/23/07 | Thursday | 10-11 | A Firm Foundation: Healthy Feet | HQ, Rm 2201 |
| September | 9/25/07 | Tuesday | 12-1 | We've Got Your Back: Key Facts About Common Injuries of the Spine | OSB I, Rm 6320 |
| October | 10/25/07 | Thursday | 10-11 | Youth, Sports and Exercise: What You Need To Know | O&C, Rm 1055 |
| November | 11/15/07 | Thursday | 10-11 | You Pick the Topic: Got Pain? Got Questions? | OSB II, Rm 3124 |
| December | 12/11/07 | Tuesday | 10-1 | Holiday Open House - Food and Consults! | RehabWorks O&C, Rm 1135 |

Mail Code Bio-8, Kennedy Space Center, FL 32899 • 321-867-7497 • <http://rehabworks.ksc.nasa.gov>

FOOT CARE AND EXERCISE CLINIC

Tuesday, Sept. 16, 2003
10-11 a.m. - O&C M.B.R.
2-3 p.m. - OSB Rm. 6320

*Learn how to
 prevent and treat...
 plantar fasciitis,
 heel spurs,
 sprained ankles,
 turf toe, shin splints,
 and much more.*

*Vendors from Thorlo Socks,
 Brooks Running Shoes, and
 Downunder Orthotics will be available
 for product review and questions.*

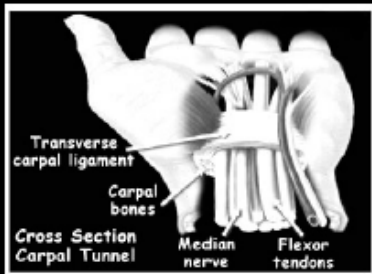
*From 10 a.m. - 1 p.m. at the O&C Fitness Center,
 1:30 - 3:30 p.m. at the OSB Fitness Center &
 3:45 - 5:45 p.m. at the KSC Intercenter Run at the SLF.*

867-7497





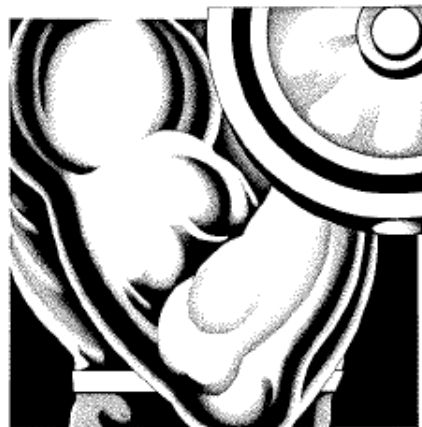
CARPAL TUNNEL SYNDROME



In the Office



...Preventing
Cumulative
Trauma
Disorders



Weight Training Injuries

Weight training...

...get strong

...burn calories

...reduce stress

...get INJURIES???



By: Karen E. Tanner

WHAT ARE SHIN SPLINTS?



MEDICAL PRODUCTS!

Now available at RehabWorks!!!

- Re-usable Hot/Cold Packs
- Electric Instant Moist Heating Pads
- Downunder Orthotics
- Don Joy Wrist Braces
- McDavid Knee Braces
- Physioballs
- Dumbbell & Ankle Weights
- Aircast Braces
- Biofreeze
- Flex-all 454 ...and much more



O&C, Rm 1135
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For product listing and prices visit
<http://rehabworks.ksc.nasa.gov>

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+ Athletic Training Room

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- + Education Outreach Request
- + Doctor Referral Form
- + Appointment Scheduling
- + Initial Paperwork
- + Patient Survey

ATHLETIC TRAINING FACT

The most common injury to both amateur and professional golfers involves the lower back/lumbosacral spine. Approximately 65-80% of golfers have a disabling back injury at one time or another.



Welcome to RehabWorks at the Kennedy Space Center, a free on-site rehabilitation program for KSC and CCAFS employees. This program is designed to return employees back to their pre-injury working status quickly, safely, with decreased sick time and minimal time away from work.

NEWS & EVENTS

2009 Spring Interns

RehabWorks would like to welcome our new 2009 Spring interns, Justin Brubaker (Eastern Michigan University) and Shannon Scarbeau (Florida Southern University)!

Physicians Page

This page has been tailored with the physician in mind. [Click here](#) to find out what services RehabWorks offers, physician testimonials, referral forms, and much more.

Microbreaks

Watch these short videos that illustrate simple stretches that can be performed throughout your day.

+ [Read More](#)

Medical Product Program

Check out our line of new medical products from knee braces and arch supports to bio-freeze and ankle weights. New products have been added!

+ [Read More](#)

New Patient Scheduling Procedures

Key points that will help you with your appointment scheduling and rehabilitation process.

+ [Read More](#)

RELATED ARTICLES

Fighting the Pain of Osteoarthritis in the Knee:

Osteoarthritis (OA) is the most common form of arthritis. This condition involves the cartilage, which acts as the cushioning between bones, being broken down in the joint over time, causing pain.

+ [Read More](#)

LEARN MORE

Instructional Videos

RehabWorks instructional video library.

+ [Watch Videos](#)

Types of Braces

Learn about the various types of braces and which one is right for you.

+ [Read More](#)

Do you know what an ATC is?

Learn more about what a Certified Athletic Trainer can do for you, your local school and your local sports programs.

+ [Read More](#)

RELATED SITES

KSC Fitness Centers

The KSC fitness centers and programs are free to KSC & CCAFS employees.

+ [Visit site](#)

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Apply Today for an
**"Out of
This World"**

Athletic Training Internship Opportunity
at Kennedy Space Center's RehabWorks Program

DON'T DELAY!

We can help you reach new heights in Athletic Training!

Contact us today: (phone) **321-867-7497**

(fax) **321-867-1144**

(email) **Erik.T.Nason@nasa.gov**

Erik T. Nason, MS, ATC, LAT, CSCS
Assistant Athletic Trainer
Internship Coordinator

KSC RehabWorks
BIO-8
Kennedy Space Center
Florida 32899





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Internship Program

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[+ Philosophy](#)

[+ Requirements](#)

[+ Objectives](#)

[- Application](#)

[+ FAQ](#)

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[+ Education Outreach Request](#)
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[+ Initial Paperwork](#)
[+ Patient Survey](#)

Internship Application

Attention: Due to heightened security and badging requirements at this government facility, it will not be possible to except Non-US citizens at this time. Please accept our apologies.

Personal Information

First Name:

Last Name:

US Citizen:

Date of Birth:

 / /

Place of Birth:

School Information

School Name:

Street Address:

City:

State:

Zip:

Year/Classification:

Address Information

Street Address:

City:

State:

Zip:

Phone:

Email:

Patient Comments

“RehabWorks is one of the most beneficial programs I have seen in my 28 years on the space center!”

KSC Quality Inspector

“The quick move from OHF to Rehab the same day I feel made a 100% difference in how quick I got to feeling better.”

KSC Lead Technician

“RehabWorks is the best program I have seen at a Government Facility. I have had 40 years DOD, DOE and NASA. The personnel were outstanding. The service I got here was equal or better then I received for my other shoulder at a very expensive Physical Therapy Clinic.”

CCAFS Employee

Physician Testimonials

“As Medical Director of the Kennedy Space Center and as an athlete who regularly competes in long-distance cycling events, I place a high value on the contributions the KSC RehabWorks athletic trainers have made to the health and recovery of our industrial athletes.

Having referred patients to these skilled clinicians over the past 11 years, I have consistently seen that their high quality of care and exceptional rehabilitative outcomes match and/or surpass that of outside clinics. In addition to the ease of access for our employees, the onsite advantage of the RehabWorks athletic trainers allows for enhanced productivity and effective case management of work injuries.”

Leon "Skip" Beeler, MD
Director, Occupational Medicine
Innovative Health Applications
Kennedy Space Center, FL

Physician Testimonials

“The athletic trainers at KSC RehabWorks perform an outstanding job in treating and rehabilitating people with orthopedic [bone and joint] and sports medicine injuries. They are personable, communicative, and work extremely well with the orthopedic physicians. I have worked with them for the past 10 years on hundreds of patients and remain extremely impressed.”

**Jeffrey Greenspoon, MD
Greenspoon Orthopaedics**



Mary K. Kirkland, MS, ATC, LAT, CSCS

Supervisor, KSC RehabWorks

The Bionetics Corporation

Mailcode BIO-8

Kennedy Space Center, FL 32899

(321) 867-7497 Phone

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